

## Abstract

The present invention relates to the effective utilization of a used catalyst containing at least molybdenum, an A element (at least one element  
5 selected from the group consisting of phosphorus and arsenic) and an X element (at least one element selected from the group consisting of potassium, rubidium and cesium), and provides a process for producing a catalyst, which comprises dispersing said  
10 used catalyst in water, adding thereto an alkali metal compound and/or ammonia solution, adjusting the resulting mixture to pH 6.5 or less to generate a precipitate containing at least molybdenum and the A element, and using the precipitate as a material for  
15 catalyst-constituting elements.